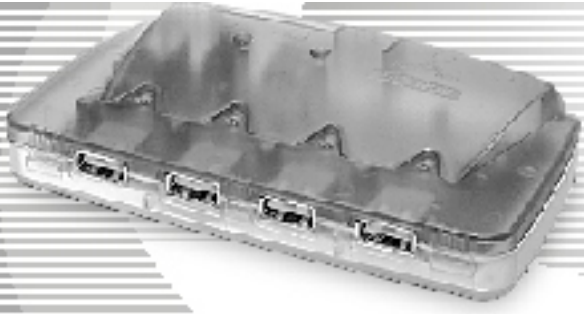
# UNIVERSAL SERIAL BUS HUB

## User Manual



**Please read this manual thoroughly and follow the instruction procedures to prevent any damage to the USB HUB and or the connecting devices.**

## Package Content

One USB Hub

One USB Cable (6 feet)

One Power Adapter DC 5V (2.5A)

## Overview

The USB Hub provides the electronic interface between USB devices and the host. It allows up to three USB devices or Hubs to connect to an upstream USB Hub or Host port, USB HUB is a complete USB 1.1 specification compatible device. USB HUB offers a real plug & play environment to the PC world.

## Features

USB 1.1 specification compatibility

Plug and play with USB devices

Bus fault detection and recovery.

All Downstream Ports support full-speed and low-speed operations

Supports Self-Powered mode and Bus-Powered mode, indicate by power LED

Low voltage drop:

1. Self-powered mode:
   Max 500mA (indicated by Red power LED)
2. Bus-powered mode:
   140mV/500mA, 14mV/50mA (indicated by Green power LED)

Individual power switches (each port):

1. Over-current protection with current limit threshold:
   500mA(Min)750mA(Typ)/1250mA(Max)
2. Turn power off in status of over-current or thermal shutdown, save power consumption
3. Soft start for slow turn-on feature prevents high inrush currents when initially powering capacitive loads

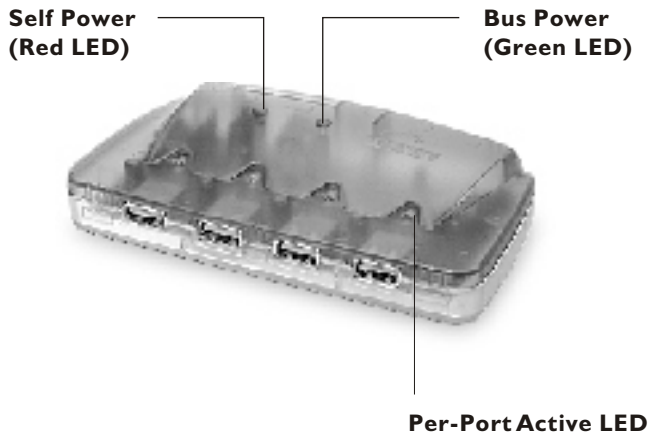
Reset by Upstream attachment or programmable reconfigure

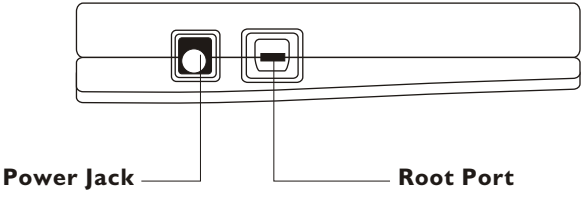
Downstream port LEDs: indicating Power and Active on/off

Self-powered mode: Shutdown system power no need to disconnect the power adapter, power consumption only 3mA for Red power LED

Supports suspend MODE

# Aspect


Self Power
(Red LED)
Bus Power
(Green LED)
Per-Port Active LED


Power Jack
Root Port

## Specifications

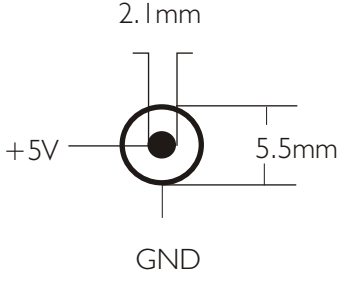
| Function | | Description |
|---|---|---|
| Power Consumption | | 3mA per LED |
| | | 40mA for HUB control circuit |
| Connector | Upstream | 1 USB Series B Receptacle |
| | Downstream | 4 USB Series A Receptacles |
| LED | Power | 1 USB-power (Green LED)<br>1 Self-power (Red LED) |
| | Port Status | 4 Port Active Status (Green LED) |
| Weight | | 100g |
| Dimension (LxWxH) | | 135mm(L)x72mm(W)x23mm(H) |

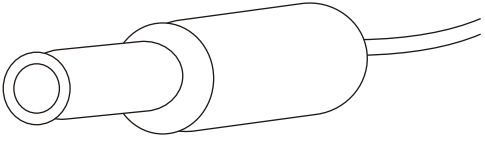
## Power Mode Setting

There are two power modes for USB Hub, one is the self-powered mode and the other is Bus-powered mode. For self-powered mode, USB Hub provides all the downstream ports with each port DC + 5V, 500mA (max.) power supply. For the Bus-powered mode, USB Hub only provides all four downstream ports with DC + 5V, 100mA each port in total. In self-powered mode please make sure that the power adapter is well installed first and the plug of Power Adapter is inserted into the Power Jack of the USB Hub, then connecting USB cable. The powered mode is auto selected while you insert (or remove) the plug of the power adapter into (or from) the power jack of USB Hub.

## Power Adapter

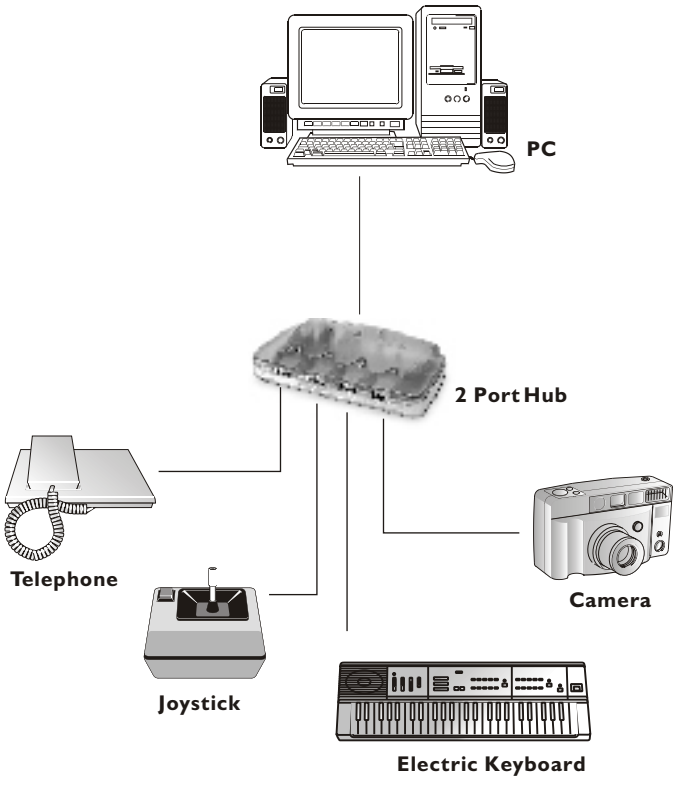
The Power Adapter attached with USB Hub is DC 5V, 2.5A (min.) which is a minimum requirement for the device. If user needs more power to supply the downstream port devices, user can purchase a new power with the Spec. of DC 5V, 2.5A. The mechanical of Power Adapter is listed in the follow figure.



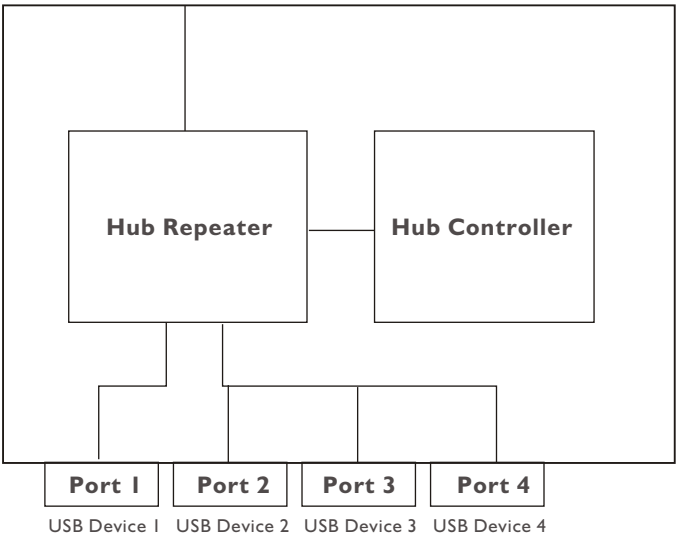



**Power Plug**

# Diagram



## USB Hub or Host Port Full Speed (Upstream Port)



# INSTALLATION

**Install the Hardware**

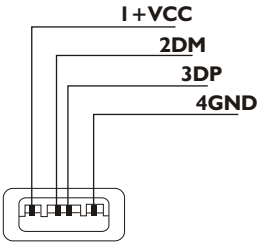
A. First of all, please insert the plug of the DC 5V 2.5A power adapter into the power jack of USB Hub

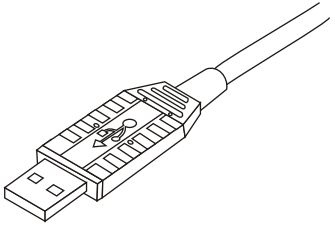
B. Connect the series-A connector (please refer to the Figure-1) of the USB cable into the downstream port of PC USB host controller (or ROOT hub) or one downstream port of the upper level (parent) hub.

C. Connect the series-B connector (please refer to the Figure-2) of USB able into the upstream port of USB Hub, the USB hub.

D. Connect the series-A connector of USB device, such as USB mouse, USB keyboard and so on, into any one of the downstream of USB Hub.

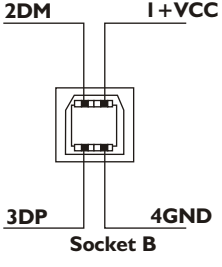
## Figure-1



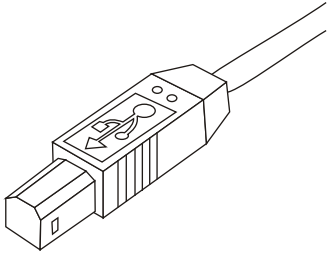



**Series-A Connector**

## Figure-2




**Socket B**



**Series-B Connector**